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SYLLABIFICATION IN ROMAN SPEECH.¹

BY WILLIAM GARDNER HALE.

THE following article² is intended only as a *prolusio* for a fuller discussion which I hope at some time to publish, with supplementary material at several points.

The received doctrine of Latin syllabification is that, in any given case, as many consonants go with the following vowel as can begin a word in Greek³ (or, as some have it, in Latin). Seelmann, whose

¹ The editors regret that the preceding pages were all in type before the manuscript of Professor Hale's article was received from Rome. Academic seniority, followed elsewhere in this volume, would have entitled him to a position at page 85.

² The principal points of the argument of this article were incorporated in a paper entitled "Did Verse-Ictus destroy Word-Accent in Latin Poetry?" which was read at the meeting of the American Philological Association in Cleveland, in July, 1895. Only the conclusions, however, could be given at that meeting, on account of the demands of the main question.

³ So, in effect, Seelmann; while Landgraf, in his Grammar, says that as many consonants go into the following syllable as in *Latin* may begin a word (Latinized Greek words being of course taken into the reckoning).

In America, the received doctrine appears in Gildersleeve's Grammar, § 10, new edition, and in Bennett's (so far, at any rate, as any reader could have the right to infer), § 4, 3. (In the separately published Appendix, which has appeared since the above was written, Professor Bennett says that in the Grammar he has followed the traditional principles, but adds that "the validity of them is open to question." See the next footnote, and the footnote on p. 267.) In Allen and Greenough's, § 14, an uncertain statement is given, all that is said on the subject being that "this rule [namely that 'a single consonant between two vowels is to be written and pronounced with the latter'] is sometimes extended to double consonants, or any combination of consonants which can be used to begin a word: as *ho-spes, ma-gnus, di-xit*." A more recent statement of Professor Greenough's view, however, has been made, with complete explicitness, in the *Harvard Studies in Classical Philology*, vol. V, in an article upon "Early Latin Prosody." The treat-

exposition I select for criticism (*Aussprache des Latein*, published in 1885; see especially pp. 132-148), writes *sic-cus* but *no-ctem*, *al-ma* but *a-mnis*, *cras-sus* but *pote-stas*, etc.

Occasional dissenting voices have been raised against this view. It continues, however, to be the orthodox opinion, appearing, for example, in so important and advanced a book as that of my friend Mr. W. M. Lindsay, entitled *The Latin Language* (1894). I cannot better introduce our discussion than by quoting the section (chap. ii, § 139) in which Mr. Lindsay states his views :

"The Romance languages show a remarkable agreement in their division of the word into syllables, their principle of division being to make the syllable end with a vowel, and begin with a consonant, or combination of consonants. Any combination of consonants that is pronounceable at the beginning of a word is made to begin the syllable, with the one occasional exception of combinations beginning with *s*, where the *s* is in some languages allowed to end the preceding syllable. An Italian says *o-bli-quo*, *te-cni-co*, *e-ni-gma*, *a-tle-ta*, *no-stro*, *be-ne*, a pronunciation which often offers considerable difficulty to Englishmen, who would, for example, more naturally pronounce the last word as *ben-e*, like 'any.' A Spaniard says *ha-blar*, *bu-llir*, but *nues-tro*, attaching the *s* to the first syllable. The Roman division of syllables was that of the Romance languages, not of the English, as is proved to certainty by the very precise and unmistakable statements of the grammarians on the subject. Their rule is, 'Never let a syllable end in a consonant if the consonant can possibly be pronounced at the beginning of the next syllable'; and they give examples like *pote-stas*, *no-ster*, *a-mnis*, *ma-gno*, *a-gmen*. The same method is followed in those inscriptions which indicate the syllables by dots, e.g., *CIL.* VI, 77 T·AN·NI·VS·HE·DY·PNVS, 11682 VI·XIT·AN·NIS, as well as by contractions, where the initial letters of the syllable are used, like *MG* (*magnus*), *OMB* (*omnibus*), *PP*

ment is based entirely upon the phonetic evidence afforded by Latin versification, but reaches the same conclusions that are reached in the present paper, and expresses the physiological facts of ancient Roman utterance (pp. 57-71) with great lucidity and with a fullness for which there is here no room. (My own condensed statement of the way in which I have been in the habit of putting the argument will be found under (2), p. 266, and in the brief table on the final page.)

(*propter*); though on inscriptions we often find *s* taken with the preceding syllable in words like CAE·LES·TI (VI, 77), SES·TV·LE·IVS (IX, 4028), with which we may compare misspellings like *disscente* (vide § 130). Occasionally a grammarian urges the advisability of regarding the etymological formation of compounds like *abs-stemius*, *o-bliviscor*; but such remarks only show that the natural pronunciation of these words was *ab-stemius*, *o-bliviscor*, just as we in natural utterance disregard the formation of phrases like 'at all,' 'at home,' and pronounce 'a-tall,' 'a-tome.' "

The criticisms which have been brought against this doctrine have been fragmentary, and have left some points quite untouched; so that even the present preliminary paper will, I trust, set the matter in a clearer and juster light, beside contributing some new evidence.

The evidence presented in Seelmann's treatment may be grouped under three heads: (1) the teachings of the Roman grammarians; (2) the supposed correspondence of modern Romance pronunciation with these teachings; (3) syllabification in inscriptions. These we will take up in turn.

(1) The statements of the Roman grammarians are generally regarded as unequivocally in favor of the received doctrine. The few who reject them commonly say that they were borrowed from the Greek grammarians, and that consequently, while correctly representing Greek pronunciation, they are no evidence for the pronunciation of Latin.¹ My own conception is that the particular statements of the Roman grammarians on which the received doctrine is founded represented neither the facts of Greek pronunciation nor the facts of Roman pronunciation,² but had their origin in a mere practical rule, — admirably simple and easy of application, — devised by some Greek grammarian for the division of words *in writing*, when one

¹ Such seems to be the conception of Professor Bennett, e.g., who (p. 31 of the Appendix) justifies skepticism with regard to the correctness of these rules for Latin by referring to "the irresponsible borrowing in the case of the testimony of the grammarians concerning the pronunciation of *z*."

² The actual facts of versification, in Greek as well as in Latin, are impossible to reconcile with these statements. The argument given on pp. 266 ff. for Latin applies exactly to Greek.

was near the end of a line and had room for a part of a word only; that this rule was adopted bodily by the Roman grammarians; that the Roman grammarians mostly, in discussing the matter, were not thinking of pronunciation at all, though, if *asked* how they pronounced, would doubtless (like the modern Italians spoken of on p. 258 below) have answered, "As we write"; that, nevertheless, a few of them did think of it, probably drawing the false inference, natural enough to any one except a trained phonetist, that, as writing and pronunciation conformed in most respects in Latin, so also they conformed in this.

To justify the position that the Roman grammarians were in general not dealing with syllabification in speech, but simply with syllabification in writing, I must, under the necessary limits of space in this paper, content myself with the citing of a few passages, choosing those that seem most important in Seelmann's exhibit.

Quintilian, i. 7. 7, says, "It is a common question whether in writing prepositions one ought to follow the sound belonging to the combination, or the sound which belongs to the parts as separated, as, e.g., when I say *optinuit*: for theory (*ratio*) calls for a *b* as the second letter, whereas the ear hears *p*; or as when, e.g., I say *immunis*, for the letter which (etymological) fact demands (*quod veritas exigit*) is overpowered by the *m* of the succeeding syllable and becomes *m* itself." Then Quintilian immediately goes on to say (and here is where Seelmann begins to quote), "in the division of syllables, too, there is a matter to observe, namely, whether to join the first consonant between vowels to the preceding or to the following syllable. For *haruspex*, because its second part is from *spectando*, will give (*dabit*) its *s* to the third syllable; while *abstemius*, because the word comes from *abstinentia temeti*, will leave the *s* to the first syllable." Now it is evident that, in the passage about *immunis*, Quintilian is not dealing with the question of pronunciation, or even with a question of spelling under an implied understanding that spelling and speech must conform to each other; for, if he had been so dealing, he would have said, not "it is a common question whether," but "there *can be no possible* question whether one should write *inmunis* or *immunis*, for the sound of the second letter *is* that of *m*," or words to that effect. In the light of Quintilian's introduc-

tion, it would be clear, even if not evident in itself, that in the second part of the passage he does not mean to say that there is a question whether we ought, on etymological grounds, to write *haru-spex* and *abs-temius*, and (a very ridiculous proposition) *to make our pronunciation conform*, — but only that there is a question how we ought to divide these words in writing. Syllabification as a matter of pronunciation is not in his mind at all.

The second passage to be quoted is the longest and apparently the most decisive one employed by Seelmann, namely, Servius in *Donatum*, K. IV, p. 427, 20. I again translate:

“When we inquire what consonants go together in writing (*quae consonantes in scribendo sibi cohaereant*), or with which syllable they are to be reckoned (*cui syllabae inputentur*), the preceding or the following, the doubt is resolved by comparing with other words. If, for example, we say *aspice* (*ut puta si dicamus aspice*) and are in doubt whether *s* and *p* ought to be separated and *s* given (*danda*) to the preceding syllable and *p* to the following, we know that this cannot be (*hoc fieri non posse*), and that we ought to give both consonants to the following syllable only, for the reason that words occur which begin with these two consonants, for instance *spica*. In the same way we ought in the case of *amnis* to put *m* and *n* with the following syllable in writing (*sequenti syllabae dare in scribendo*), since words are found that begin with these consonants, as for instance *Mnestheus*. In the case of *attulit* we cannot put two *t*'s with the following syllable, because no word is found that begins with two *t*'s. And we shall observe the same rule in the case of other consonants.” At this point the text is corrupt, the words “we ought clearly to understand” (*plane scire debemus*) not being followed by the infinitive construction which is expected; but the rest is intelligible: . . . “combinations of consonants, not only those that belong to Latin syllables but those also that belong to Greek, excepting, of course, the letters *bd*, which never pass over into Latin in a combination such as is found in $\beta\delta\epsilon\lambda\lambda\alpha$. For in writing *abditur* we cannot put *a* in one syllable and *b* and *d* in the following one.”

Is Servius talking here about speech or about writing? Does his phrase *ut puta si dicamus aspice* mean “in pronouncing *aspice*,” or “in the case of the word *aspice*”? This can be settled partly by the

general nature of his tests, partly by the rest of his phraseology. As for the former, one needs only to substitute English words for Latin to see how little the whole matter has to do with the actualities of speech. If, for example, we were trying to determine with which syllable the *s* in "aspirate" and the *th* in "athlete" are actually pronounced, the decision would not in the least turn upon the question whether there exist words like "spiral," beginning with *sp*, and borrowed words like "thlipsis," beginning with *th*. The sentences about *aspice* and *omnis* are enough of themselves to indicate that Servius is thinking only of syllabification in writing. One hardly needs his express words "*in scribendo*" used both before and after the *ut puta si dicamus*, to make this evident; but, if one does need them, there they are. What it is hard to understand is how so destructive a statement can ever have been employed in constructing the doctrine for which it is cited.

Another passage quoted by Seelmann is equally explicit. Caesellius, K. VII, p. 206, 1, says: "Is *obliviscor* a compound or a simple word? A compound, for its simple form may be seen if you examine ancient monuments:¹ for there exist upon them the forms *livisci* and *livitus* which latter by elision gives us our *oblitus*. Getting this clearly in mind, anybody will readily understand that in writing the division should be *ob* and *liviscor* (*planissime quivis intellet in scriptura verbi huius divisionem ob et liviscor*)." It is evident that questions of speech in any language are not to be settled by investigating forms on ancient monuments. One does not need the express words "*in scriptura*" to see that Caesellius is talking about writing, not about speech; but, if one does need them, there again they are!

Two other passages, equally clear, may be briefly cited: e.g., Caper, *Orthogr.*, K. VII, p. 96, 9, *pronomina nostrum ac vestrum si in scriptura dividenda sunt, s littera posteriori syllabae applicari debet. Sic, si maiestas scribis, stas in diductione vocis esse debet, non tas* (*vocis* here is simply "the word," as frequently); *Orthogr. Bern.*, K. Suppl., p. 300, 4, *apostolus si necesse est syllabam dividi, non o et s, sed s et t iunctum esse debet.*

¹ It is a matter of indifference to the argument whether the reading of B be adopted or not, namely, *in antiquis nominibus et monumentis*.

These are fair specimens. It seems clear, then, that in general the grammarians who wrote about the division of syllables were not thinking of phonetics at all, but only of writing.

On the other hand, I differ from Havet, who doubts (see footnote on p. 260) whether any ancient grammarian has anywhere spoken of the phonetic division of syllables. I find references to phonetic division in Priscian and Bede, and, by implication, in the Greek Herodian, whose rules, probably meant for Greek only, were evidently discussed by the Romans as applying to Latin.

Priscian, K. II, p. 45, 4, says, "if the preceding syllable ends in a consonant, the following one must necessarily begin with a consonant, as e.g. in *artus, ille, arduus*, — unless the word is a compound, like *abeo, adeo, pereo*" (the common rule being that prepositions in composition should be separated from the rest of the word). "Herodian, however, in his treatise on Orthography, lays down the doctrine that it is more logical and more telling in effect upon the ear¹ (*rationabilius esse sonoriusque*) in point of actual utterance (*quantum ad ipsam vocis prolationem*²) to observe the same rule for compounds as for uncompounded words, in dividing letters between syllables. In answer, on the other hand, the objection is made that, according to this *oblatus, oblatus, obruo, abrado*, and the like, if the *b* passes into the second syllable, as in uncompounded words, ought to have the first syllable common in verse, so that it might appear as short; but such a thing never happens. Further, words like *circumeo* and *circumago* would not suffer an elision of the *m* in pronunciation (*in pronuntiatione*), nor, in words like *perhibeo, exhibeo, inhumatus, anhelio, inhibeo, adhuc, abhinc*, would the vowel with which the second syllable begins be aspirated if the consonant that ends the first syllable of the preposition passed over to it, as in *istic, istaec, istuc* (*quomodo in 'istic,' 'istaec,' 'istuc.'*)"³

¹ I can attach no other meaning to the word *sonorius*; but, at any rate, it has in some way to do with actual speech.

² The phrase means of course merely utterance, not a prolongation of sound.

³ In what he says about *istic*, etc., Priscian is referring to the explanation which he gives, in K. II, p. 589, 13, that these words are made up of *iste + hic*, etc.; and he means that the *t* which his etymology assigns to the first part of the compound is pronounced with the second part. His remark accordingly does not touch the question of the place of the *s* in pronunciation.

On the above passage the following comments are to be made. First, Herodian, though evidently dealing mainly with writing in the book from which it is taken (Priscian says "in his treatise upon Orthography"), was thinking of speech as well when he used the word *sonorius*, and Priscian was necessarily doing the same thing when he quoted the word. Secondly, in giving his argument against Herodian, Priscian clearly still has actual pronunciation in mind, since he refers, in the same connection, to the *non*-pronunciation of *m* in *circumeo* and *circumago*.

Bede's phraseology is still more explicit. He says (K. VII, p. 273, 7), *fructum cum dicis sive scribis, c secundae syllabae iungis*; (K. VII, p. 279, 19) *maiestas cum scribis aut dicis, s secundae syllabae complicari debet*; (K. VII, p. 289, 28) *sollemne cum dicis aut scribis, m sequenti syllabae conectis*.

While, then, the grammarians who have been cited as dealing with the subject were in general only thinking of division in writing, it ought not to be held that none of them ever had phonetic division in mind.

Bede, however, it should be said before we pass on, does the case for phonetic division more harm than good; first (*a*), because the general character of his other expressions on the subject shows that it was syllabification in writing, not in speech, that was mainly in his mind; and, secondly (*b*), in betraying that he is borrowing from earlier sources, and drawing an inference about which these sources said nothing.

(*a*) The other expressions referred to are the following: "Aegyptum cum *in scriptura* dividere vis, p sequenti syllabae iungis," K. VII, p. 263, 22; "conspectus cum *in scriptura* dividendum est, c sequenti syllabae iungis," K. VII, p. 268, 20; "columna cum *scripto* dividendum est, m sequenti syllabae nectis," K. VII, p. 268, 25; "defunctus cum *scripto* dividitur, c sequenti syllabae iungenda," K. VII, p. 270, 18; "praegnantem cum *scripto* dividis, g secundae syllabae nectis . . . ; "propter, *in divisione scribendi*, p secundae syllabae iungis," K. VII, p. 286, 3.

(*b*) As for the second point, Seelmann, apparently without recognizing the damage done to his own doctrine, himself points out that the coincidences between Bede and Albinus imply that they were

both borrowing from an earlier source. A specimen instance is: *praegnantem cum scripto dividis, adnectis g secundae syllabae, et alia eiusmodi, ut pignus, dignus* (Albinus, K. VII, p. 307, 1); *praegnantem cum scripto dividis, g secundae syllabae nectis: pignus et pignus similiter et cetera huiusmodi*" (Bede, K. VII, p. 286, 3). One can even go back farther than this, and show, in the case of Bede of the seventh and eighth centuries and Capser of the second, either a borrowing of the former from the latter, or a borrowing of the former from the same source from which the latter borrowed. Where Capser in the passage quoted above says *si maiestas scribis*, Bede says *maiestas cum scribis aut dicis*. Bede's thrice-repeated phrase *cum scribis aut dicis, cum dicis sive scribis*, etc., is consequently, while worth little as evidence in itself (Bede was not born until 674), of considerable importance as marking by contrast the very general absence of any evidence in the earlier writers that *they* were thinking of pronunciation.

(2) Much stress is laid by the advocates of the received doctrine on the coincidence of the statements of Roman grammarians with the facts of Romance pronunciation of to-day. If, for the moment, this coincidence be granted, I confess I should still, for reasons to be given below, find it hard to accept the doctrine. I should be much more inclined to suspect that the Romance languages had in this regard departed from Roman usage. Such a thing would be no more remarkable than the admitted change from quantitative to accentual versification. But the actual state of affairs, so far as concerns the combinations of consonants in question, is not one which will justify the word coincidence.

It is the verdict of the phonetists that the Italians say, e.g., *ba-sta, fre-sco, capi-sco, te-cni-co*, and the like. Now I am well aware of the danger of venturing to express doubt where a phonetist like Storm has given his decision. Yet to my ear the division in daily speech is generally *bas-ta, fres-co, capis-co, tec-ni-co*, and the like. I have recently tested with care the pronunciation of about twenty-five Italians, mostly Romans, but in part Florentines, and representing all walks in life. In nearly every case the division in speech in words of this kind has clearly seemed to me to be between the consonants, *until the purpose of my test was understood*. The moment

that was known, the syllables, provided the person could read and write, were strongly separated, and the division became *ba-sta, fre-sco, te-cni-co*, etc.¹ In many cases the explanation was volunteered that the "rule" was to divide in this way; and to my statement that the actual pronunciation seemed otherwise, and that the rule was probably only for writing, the answer was (except in four of these cases) that the division in writing and the division in pronunciation were the same. Now we have here, I imagine, a state of things very much like that in ancient Rome. There stand in the Italian grammars, I find, certain rules, corresponding to the rules of the ancient grammarians, and probably directly descended from them. Books and newspapers follow these rules. Concerning, as they do, one of the first things taken up in the grammars, they are known to all people of any education, and underlie their consciousness. I found, in making my tests, that a tobacconist and a keeper of lodgings, who were of the twenty-five, were as ready to cite them as was the university professor to whom I had previously gone. Knowing these rules, an Italian who is asked where the division comes or who is for any reason conscious of making a division, gives it as he has learned it, and as he sees it constantly occurring in print.² Very likely an ancient Roman, if asked the question "how do you divide in pronouncing *technicus*," would have answered "*te-chni-cus*," and would have referred you to Capere or somebody else, according to his day and generation.

I suspect, therefore, that those who have made the tests have not been careful to leave the persons upon whom they experimented in ignorance of the nature of the question.³

¹ Except in two cases, the pronunciation of *tecnico* was actually very nearly *tengnico*. This fact is interesting in connection with the question whether, as Brugmann and others think, *gn* in Latin had the sound of *ngn*.

² My landlady in Florence, being set to pronounce a group of words, seemed to myself and another witness distinctly to be saying *ques-to*, and the like; but, when I asked her how she divided the syllables, she said equally distinctly, *que-sto*, etc., and to my question "perchè divide così?" made answer "perchè *scrivendo* si divide così!"

³ The tests referred to above were all made with repeated pronunciation of the words employed. The test from listening to public speaking is, of course, very unsatisfactory; yet I ought to note one case which was in opposition to my other

Further, there is an additional reason why one might easily go astray. The final vowel in Italian is given with much less energy than any other vowel. The preceding consonant shares this weakness. Accordingly, in a word like *questo*, the last consonant is about on the same grade of feebleness with the *s* which belongs (*me iudice*) to the dying expiration of the first syllable. And this parity, or approach to parity, of the two consonants in point of vigor, and the feebleness of both of them as compared with the preceding vowel at the moment when it is first struck, will easily make the two consonants seem to go together and to belong where the second unquestionably does belong. The same state of things also exists, though in a lesser degree, where the accent is upon the antepenult.

The only method of proof would be through the application of an instrument like that of the Abbé Rousselot, the power of which, in portraying the elements of a given word to the eye through the movement of a dry pen upon a paper blackened with soot, is so great that almost anything might be expected of it, provided the persons upon whom the experiment was made were kept in complete ignorance of the question to be answered, and were not made to pronounce so slowly that their grammatical consciousness would be set to working. Unhappily, however, there is no such instrument in Rome, or, so far as I can learn, in Italy. The University of Chicago possesses one, and at a later time I shall hope, through the kindness of a colleague, to have the test made upon Italians recently arrived in America. Meanwhile the question of Italian usage must be left unsettled, or, since the evidence as a whole will presently be seen to be sufficient in any case, may be answered as Storm has answered it.

experiences. One orator, who had the habit of varying his delivery by speaking very slowly, said clearly at one point "*non ba-sta*," with long-drawn emphasis. The same orator at other times, in more rapid utterance, seemed clearly to say *es-pos-to*, and the like. In view of my general experiences, I am led to believe that in slow and emphatic utterance he was governed by a grammatical sub-consciousness which in ordinary utterance was wanting. I may, of course, be at fault here, as I may have been in some of the express tests which I made. Yet I should find it extremely difficult to believe that there were not unmistakable cases of the pronunciations *cos-ta*, *es-pos-ta*, *fres-co*, *tec-ni-co*, and the like. I am forced to expect that instruments of precision will show either that the pronunciation is regularly *fres-co*, and the like, or that usage varies.

For, whatever be the case in Italian, it is not the same in other languages. Seelmann himself, on page 150, grants *es-tar*, *es-celente*, *nues-tro* for Spanish, so that the evidence begins to be divided against itself. For French, following Sachs, Seelmann gives *e-sprit*, *e-spérer*, etc. But, on the other hand, Havet,¹ in an article in the *Revue Celtique* for April, 1895, has shown that the character of the vowels in certain words in Old French proves that the consonant in question belonged to the same syllable with the previous vowel in Latin pronunciation. His argument is, briefly, as follows: *lepor* gives *lièvre*, *canis* gives *chien*, *caput* gives *chief*, *capra* gives *chèvre*, etc. Where, then, the first syllable ends with a vowel (as all agree that it did in these Latin words), Old French shows a diphthong. But no diphthong appears in, e.g., the descendants of *costa* and *rupta*. The division was therefore not *co-sta*, *ru-pta*, but *cos-ta*, *rup-ta*. Even if the case, then, is as Seelmann claims in Italian, it is different in French, and, in part, in Spanish; the evidence from the Romance languages, being thus divided against itself, has consequently no weight, but leaves the scale to be turned according as other evidence shall be put into the balance.

The evidence under the first two out of the three counts into which we have divided Seelmann's argument accordingly gives nothing to justify his view.

(3) We come next to the evidence to be found in inscriptions, which, so far as I know, was first pointed out by Seelmann.

¹ Havet's note is à propos of an article by Whitley Stokes in the *Academy* for March 2, 1895, No. 1191, on the syllabification which he has found in an Irish manuscript of alliterative poetry. An example is *Pergen-finus tendmin*, which Whitley Stokes says agrees with Latin syllabification. In the same way, the word *Lucretia* alliterates with *c*. On the other hand, *sp*, *ct*, *st* alliterate with *p* and *t*, as in *Anas-tasius zœdlich*; and this he notes as differing from the Latin method. Havet answers that it differs from the method of division in writing, but not from "la division phonétique, dont (he adds) je doute qu'un ancien ait jamais parlé." He does not examine individually the passages from Latin authors, but proceeds to give briefly the argument from versification, and the argument from Old French recounted above.

While I am in complete accord with Havet's general conviction, and even sympathize with the impatient tone with which he passes by the supposed evidence of the grammarians, he seems to me, as I have already said, to have made too strong a statement in the sentence quoted.

Seelmann holds that the division of words between lines is entirely untrustworthy, and cites such cases as F||ELICIS, F||RATER, and PARE||NTI (*CIL.* VI, 13614). (To this point we shall return later.) He finds, however, in a small number of inscriptions, punctuation between syllables as well as between words, and cites these inscriptions in support of his view. I give his first example as a specimen (*CIL.* VI, 77):

T·AN·NI·V̇S·HE·DY·PNVS
DO·MI·NAĖ·CAE·LES·TI·
DONVM·DEDIT·IV̇S
SVS·A·NV·MI·NAE
·EIVS·

In every case cited the point precedes the single consonant, and precedes the combinations *pr* and *tr*. It also in every case separates the consonants in the groups *ll*, *nn*, *ss*, *tt*, *lc*, *np*, *ng*, *ns*, *nt*, *rc*, *rn*, *rt*, and separates *n* from *br* in the groups *nbr*. Thus far the evidence is in accord with what is agreed upon by everybody. The point at issue is reached when we find combinations like *ct* (one example), *sc* (two examples), *st* (seven examples), *pn* (one example), *pt* (one example), *mpt* (one example), — all these being in inscriptions in Roman letters), — and *NKT*, corresponding to *nct* (one example, in a Latin epitaph in Greek letters).

These combinations occur fourteen times in Seelmann's inscriptions. Supposing now we were to find that, in the large majority of cases, the two consonants followed the point, but that in a small minority, say two or three, the point separated them, what inference should we draw? Necessarily the inference that, while theoretical syllabification, taught in the schools in exercises in writing and followed by the copyists of manuscripts, put the two consonants into the following syllable, actual pronunciation put the first of the two consonants with the preceding vowel, the result being that the tradition of writing was, in these few instances, broken in upon. How much stronger is the case, then, when the count is given; namely, four examples in favor of Seelmann's view and ten against it!

The four in his favor are *mpt*, *nct* (NKT), *pn*, and *ct*, each with one example. I will not stop to urge, with regard to the first two, that the ear might easily be deceived in combinations of three letters beginning with a nasal. As regards *pn*, it is not a particularly fortunate instance for Seelmann, since the break upon traditional syllabification, founded largely on Greek usage, is least likely to have taken place in the case of a purely Greek combination (the instance is the proper name HE·DY·PNVS). As regards *ct*, the example cited, namely, IN·VI·CITE (*CIL.* VI, 80), really conveys, in the insertion of the *i* between the *c* and the *t*, very strong evidence against Seelmann's theory. It is evident that the stone-cutter, though following traditional syllabification, really felt a clear separation in pronunciation between the *c* and the *t*; which is as much as to say that he pronounced the *c* with the preceding vowel. Our count ought accordingly to be so revised as to read three cases for Seelmann and eleven against him.¹

As the matter now stands, then, the evidence from inscriptions though he does not himself state the fact, is opposed to Seelmann's view, in particular with regard to *st*. Moreover, he still has left one difficulty, not yet mentioned, but obvious enough, namely, the difficulty of accounting, upon this view, for the facts of Roman versification. He is therefore obliged at two points to weaken his own case, though apparently without realizing the harm which he is doing.

(a) On pp. 144, 145 he says that in imperial times the tendency was to pronounce with the preceding vowel an *s* followed by a consonant. Together with evidence from the grammarians he very justly cites such spellings as *disscente*, *iussta*, *Vessta*. But this is really a damaging admission, not a defense. As for the chronological limitation, he gives no evidence for it except established Roman theory, which, as seen above, has to do with writing, not speech, or, at any rate, on the best claims that could possibly be set up for it,

¹ It is singular that Seelmann was able to print his page of examples without recognizing that they made heavily against his case; and it is remarkable, too, that, after once admitting a doubt, Professor Bennett (Appendix, p. 32) should have seen only that exceptions to Seelmann's rule occur in his examples, instead of recognizing that his examples, so far as they go, prove the very opposite of his rule, and that the true "exceptions" are the few cases which are in his favor.

confuses the two. Moreover, Catullus's *nulla spes*, and Ennius's *stabilita scamna*, to be discussed below (p. 267), will be found upon examination to contradict this limitation. Such early spellings also as *exstrad*, *proxsumeis*, *saxsum*, point to a pronunciation in which a part of the *x* sound goes with the first vowel.

(b) On pp. 107-108 he assumes, for poetry, an artificial separation of groups which in daily speech could not be separated. *Agmen*, *factum*, *se-phem* became, he suggests, *a-g...men*, *fa-c...tum*, *se-p...tem*. This position is untenable. If it be true that in daily speech the pronunciation was *se-phem*, etc., then a clear conclusion follows: unless, (as is incredible with this division) there was in daily speech a perceptible pause after the explosion of the *p*, — which would really make the word a trisyllable with one syllable composed of nothing but a consonant, namely, *se-p-tem*, — then the first part of the spoken word must have been at least *nearer* that amount of length which is called short than that amount of length which is called long. But if this were so, then such a syllable would always appear in verse as short, not as long, or, at any rate, there would be fluctuation in quantity, — which never is the case in classical poetry in pure Latin words. Compare (2), p. 266.

But the matter of the evidence from inscriptions cannot be allowed to rest here. Seelmann does not say or imply that he has made a count in the *Corpus*, though, for the purposes of a book of such a scope and range as his, this might well have been done. I shall presently make this count for the inscriptions found on Italian soil, having been prevented, up to the moment when it is necessary to go to press, by other demands of the work of the American School of Classical Studies in Rome. Meanwhile I will provisionally add to Seelmann's list the examples on which I have happened in general work upon inscriptions of the City and its neighborhood, together with others, likewise from Roman inscriptions (namely those lying between nos. 24321 and 29680), which Mr. Walter Dennison, Fellow of the School, has been good enough to get for me through a methodical reading of vol. VI, part iv, fasc. i, of the *Corpus* (from PLOTIVS down to the end of the Tituli Sepulcrales), and two examples afforded by Hübner's list in the *Exempla*, p. lxxvii. The examples are nearly all from sepulchral inscriptions. Interpunctua-

tion, being opposed to the best usage, is of course far less likely to occur in state inscriptions, or inscriptions in honor of important men. But, on the other hand, these humbler inscriptions reflect actual pronunciation more justly, since the humbler class of stone-cutters employed upon them are the very class who would be most likely to be governed by their ears, and least likely to know, or knowing, to care for, the rules of the professors.

The following list gives both Seelmann's examples and the additions, the former being placed first, and further distinguished by being underlined. The doubled bar indicates divisions between lines.

HE·DY·PNVS, VI, 77.

RE·DEM·PTO, IX, 1520.

ΞAN·KTΩ, De Rossi 11.

SANC·||TISSI MAE, VI, 26510.¹

PV·BLICIA, VI, 25120.²

PV·BLICIAE, VI, 25127.

OB·LATVM, IX, 5439.

IP·SE, VI, 15546.

OP·TI·MO, IX, 1520.

OP·TI·MO, VI, 12288.

RVP·TA, VI, 15546.

O·PTI||MAE, VI, 15799.

SEP·TI·MI·O, VI, 26260.

OP·TI·ME, VI, 26353.

IN·VI·CITE, VI, 80.

OC·TA·BI·A||NO, VI, 14560.

E·PIC·TE·SIS, VI, 16898.

OC·TAVIA, VI, 23357.³

VIC·TORI·NVS, VI, 25928.

PRO·TO·CTES, VI, 28093.

VIC·TO·RI, VI, 28905.

COS·MAE, VI, 26345.

SO·MNO, VI, 11951.

SEM·NE, VI, 26146.

A||LVM·NAE, VI, 28093.

SEM·NO, XIV, 852.

A·LVM·ne,⁴ XIV, 1481.

PRS·CVS, VI, 11682.⁵

ARES·CVSA, VI, 13596.

¹ SANC·T·O, VI, 3689, is invalidated by the second point.

² I pass without discussion the difficult case of the mute and liquid *bl*, crediting the two examples to Seelmann.

³ The value of the evidence of OC·TAVIA is lessened by the fact that it is immediately followed by the false QVI·ET·A, and of SO·MNO by the fact that it is immediately followed by AE||TERN·ALI. It seems best, however, to give both. Any reader who disapproves can subtract one from each side.

⁴ The last two letters are a sure restoration.

⁵ For PRIS·CVS.

CRES·CENTI, V, 16567.	POTVIS·TIS, VI, 15546.
CRES·CEN·TI, VI, 16569.	EGIS·TIS, VI, 15546.
CRES·CES, VI, 26353. ¹	INIVS·TA, VI, 15546.
CAELES·TI, VI, 77.	EGES·TAS, VI, 15546.
BLAS·T E·NI, VI, 11682.	PIS·TES, ² VI, 15546.
SES·TV·LEI·VS, IX, 4028.	HOS·TILIAE, VI, 19574.
SES·TV·LE·IO, IX, 4028.	ADRAS·TVS, VI, 21617.
A·MET YS·TO, IX, 4028.	FAVS· TINAE, VI, 24612.
IVS·TI·NA, IX, 4028.	POS· TERIS·QVE, VI, 27977.
AVGV S·TA·LES, X, 2194.	POS·TERIS QVE, IX, 3437.
FAVS·TE, VI, 12866.	RES·TV·TAE, VI, 28427.
CAS·TI·NI·VS, VI, 14560.	VE·NVS·TA, XIV, 1648.
CAS·TI·NI·O, VI, 14560.	BLAS·TE·NIS, XIV, 1731.
STA·TV·IS·TIS, VI, 15546.	POS·TE, XIV, 1731.

If the count at the present stage be taken, it will be found, with every possible concession made to Seelmann's side, to stand as follows: For *pn*, 1 to 0 in favor of the received doctrine; for *mpt*, 1 to 0 in favor of it; for *nct*, an even 1 to 1; for *bl* (not in compounds), 2 to 0 in favor of it; for *bl* (in compounds), 1 to 0 against it; for *ps*, 1 to 0 against it; for *pt*, 5 to 1 against it; for *ct*, 5 to 2 against it (IN·VI·CITE being counted in these 2); for *sm*, 1 to 0 against it; for *mn*, 4 to 1 against it; for *sc*, 5 to 0 against it; for *st*, 25 to 0 against it. Granting Seelmann, then, the case of *ct* mentioned above (which really is strongly against his view), the count thus far stands 9 for him and 48 against him. Comment does not seem to be called for.

As for the division between lines, it is quite true, as Seelmann says, that all kinds of irregularities occur. It does not, however, seem to be true that this is the case with the majority of inscriptions. A preliminary count which Mr. Dennison has made of about 500

¹ CRES·C·ENS, VI, 16577, is too faulty to count.

² The Corpus gives also PIS·TE in line 9, and NAS·CI in line 12; but in the inscription itself (Galleria Chiaramonti in the Vatican) I find PISTE and NASCI.

inscriptions shows that the large majority conform to rule in the cases about which all are agreed, while the large majority are against the rule in the cases under dispute. If, as is probable, the same results shall be given by the complete count spoken of above, they will constitute a weighty argument against the received doctrine.

Having thus examined Seelmann's argument, we are now ready to present the case as a whole in brief form, and to draw the necessary conclusion.

(1) The rules of the grammarians put *ct*, *pt*, *cm*, *chm*, *chn*, *mn*, and the like on one and the same footing. Now the Romans of the third century before Christ, so far from being capable of pronouncing such combinations as *cm* and *chn* in one syllable, were not even capable of pronouncing them in contact in *two* syllables, as is shown by words like *Alcumena*, *drachuma*, *techina*, etc.¹ They did in time learn to pronounce these combinations with no perceptible vowel sound after the explosion of the first consonant; but it is very improbable that they learned habitually to begin a syllable with them. Remnants of the old difficulty appear as late as Varro's time; witness his *guminasium*, *R.R.* i. 55. 4. If Varro did not even say *gum-nasium*, it is very unlikely that he was in the habit of saying *o-mnes*. On the other hand, it was possible for a poet who was steeped in Greek, and founded his metres upon Greek models, to invite his readers to pronounce on occasion as the Greeks were able to do on occasion, and so, e.g., to make the first syllable of *Tecmessa* short, as in Horace's *forma captivæ dominum Tecmessæ* (where the pronunciation was probably *Te-cmessæ*). An occasional variation of this sort only strengthens the case of the other side for pure Latin words, in which such a phenomenon is never found.

(2) The first syllable of *esse* (to select a typical example), is everywhere long, though the vowel is known to be short. This must mean that the first *s* was distinctly pronounced (necessarily with the preceding vowel), and, under these circumstances of obstruction of utterance before the following *s*, *was so dwelt upon as to occupy an amount of time roughly equal to that occupied in the utterance of a short vowel*. But the case must have been similar with, e.g., the first

¹ Compare also such later spellings as *ARIADINE*, *CIL.* VI, 21398.

syllable of *asper*, which everywhere in poetry has the same length as the first syllable of *assis*. What the length of the syllable in question would have been if the *s* had gone in pronunciation with the same expiratory effort as the *p*, is shown by what is found when, in poetry, a word ends with a vowel and the next word begins with *sp*. The syllable in question is regularly short. On the other hand, such occasional phenomena as *nulla spes*, Catull. 64, 186 (— — —), *stabilita scamna*, Enn. ap. Cic. *Div.* i. 48. 107 (∪∪ — — ∪), can be accounted for only by supposing that, in these cases, the *s* was uttered in closer relation than usual with the preceding vowel, *as if it formed a part of the same word with it*, — in other words, only by supposing that, in ordinary pronunciation within the limits of a word, the first of two consonants (not a mute and a liquid) belonged to the same expiratory effort with the preceding vowel. And it is only upon this theory, too, that the fluctuating length in the case of mute and liquid can be accounted for (ordinarily, e.g., *patri*; in verse either *patri* or, with the first consonant pronounced as obstructed, *pat-ri*, at the poet's convenience). This theory alone, too, makes intelligible the fact, pointed out by Priscian in opposition to Herodian in the passage quoted on p. 255, that in a word like *oblatus*, *obruo*, etc., the first syllable is always long.¹ *Obruo* with a long first syllable and *fabro*

¹ Professor Bennett, Grammar § 4, 4, lays down the rule, "But compounds are separated into their component parts; as *per-it*, *ab-radit*."

In the Appendix, p. 32, he uses Priscian's argument from *ablatus* and *abrado* to show that in such words the mute must have been joined with the preceding vowel. Then, a little later, he says, "As regards the rule laid down in the Grammar (§ 4, 4), to the effect that prepositional compounds are separated into their component parts, the evidence seems altogether against this. The division *per-eo*, *inter-ea*, gives us a closed (i.e. long) syllable, whence it would appear that the actual division in such cases was *pe-reo*, *inte-rea*, exactly as in *ge-ro*, *te-ro*; i.e. compounds were treated precisely like other words."

The last sentence, which contradicts his own conclusion about *ab-latus* and *ab-rado* quoted above, of course does not express Professor Bennett's meaning, which must be that compounds are treated like other words when the second part begins with a vowel. I call attention to the passage, however, because it contains a conception which has evidently been thought out, and which seems to me likely to mislead, namely the conception that a closed syllable, i.e. a syllable ending in a consonant, is necessarily long. The first syllable is closed in the English word "many," yet it is distinctly short. The first syllable of "battle"

with a short stand in a perfectly reasonable relation to each other, provided the former was pronounced with a conscious separation of the parts, which brought with it the separation of the mute from the liquid. (Note the corroborative example OB·LATVM above, which I have verified from the original in the Galleria Lapidaria of the Vatican.) But, if it be granted, as it must be, that in *ob-ruo* the length of the first syllable is due to the fact that, in addition to a short vowel, it contains a consonant pronounced in clear separation from the following consonant, then the same cannot be denied in the case of *omnis*, *asper*, and the rest.

(3) The same side receives some corroboration from a source which, so far as I have noticed, no one had pointed out in this connection, namely, Priscian's scansion of the verses of Vergil which form the subject of his *Partitiones XII Versuum Aeneidos*. The verses in which combinations that concern us occur are divided by him as follows :

Conticu ere om nes in tenti que ora te nebant
(K. III, 478, 22).

Turnus ut infrac tos ad verso Marte La tinos
(K. III, 512, 16 P).

Ut bel li si gnum Lau renti Turnus ab arce
(K. III, 496, 3).

(pronounced *batl*) is short even though the second syllable begins with a consonant. The last syllable of Latin adjectives in *us* is closed if it happens to end a verse, as e.g. *amarus* in a hexameter. Yet one does not believe that in such cases the syllable was long. The first syllable of *perco* would be short, no matter whether the *r* belongs to it or not. There is no magic in "closure." It requires something more than that to make a syllable with a short vowel long, namely a perceptible dwelling upon the closing consonant; i.e. a continuation in the case of continuous sounds (e.g. *n*), and a perceptible pause between the moment of contact and the moment of opening,—in technical phrase, between implosion and explosion,—in the case of so-called momentary sounds (e.g. *p*). Now modern European languages (Italian, within a certain limited range, being excepted) do not so dwell upon consonants. In the English word "incidentally," e.g. (pronounced *incidental*) every syllable is short, in spite of the consonants. In Latin, as is also the case in other languages, the pronunciation of a consonant that opened a syllable was rapid, and so was, in daily speech, the pronunciation of the easily tripping combination made by a mute and a liquid; but in Latin, as is not the case in modern languages in general, an obstructed consonant, i.e. a consonant standing before another (the two not being a mute and a liquid), *was* perceptibly dwelt upon, occupying about as much time as a short vowel itself.

In the first two, though the Roman theory of syllabification would make the divisions *o mnes* and *infra ctos*, the scanning clearly indicates that to the ear the first consonant was felt to belong to the same impulse (syllable) with the preceding vowel. In the third verse, it might look at first blush as if this evidence were neutralized through the division *si gnum*. But if it be true, as Brugmann and others think, that the pronunciation of Latin *gn* was like that of *ngn* in "sing now," then we should expect a fluctuation in the division. To one person it would seem that, since the *g* had this sound only in combination with the *n*, to write *sig-num* would be to suggest a false pronunciation; while to another it would seem that the *g*, which really stands for a sound separable from that of the *n*, should be written with the syllable in which it was pronounced. In any case, however, and upon any view, the evidence of the three verses taken together is strongly adverse to the received theory. As has been pointed out once before, it is easy to account for the following of the rules of the professors for syllabification in writing, even though actual speech was at variance with them; while, on the other hand, it is very difficult to account for the violation both of these rules and of the actual usage of Roman speech.

(4) The evidence thus far accumulated from inscriptions is on the same side, and, though incomplete, is so respectable in quantity as to make it certain that, when it is completed, its character will not be reversed.¹

(5) The statements of the grammarians seem, in general, to have to do with syllabification in writing, not with syllabification in speech; and the strongest phrase which identifies the two comes from a very

¹ As for manuscripts, it is commonly believed that the division of syllables found in them is in harmony with the teachings of the grammarians. This, if it be a fact, would be of little more weight than such a fact, e.g., as that the present writer, who believes these rules had nothing to do with actual speech, is in the habit of conforming to them punctiliously in copying Latin or reading proof. The very object of the rules was to provide a clear method to follow "*in scribendo*," and nothing could be more natural than that the scribes should accept gratefully what was so happily laid down for them. On the other hand, violations of the rules would be significant. The earlier the manuscript, of course, the more its evidence would weigh. At a later time, I hope to present some definite facts. At present, I can only say that violations do occur, and are not infrequent.

late writer, who, by comparison with other writers, is found to be adding his own inferences to earlier statements which dealt purely with syllabification in writing.

(6) The testimony of the Romance languages is divided against itself.

This evidence, taken as a whole, leads to a clear inference. We are obliged to conclude that the first of *any* group of consonants,¹ not a mute and a liquid, belonged in actual Roman speech to the same expiratory effort with the preceding vowel, and was so clearly and fully pronounced before the obstructing consonant that to our modern ears it would have seemed distinctly to be dwelt upon; and that it is in consequence of this physiological fact of utterance that we find length in such a case, although the vowel be short. In my teaching I have been in the habit of using the following formula, which aims both at exactness and at simplicity: *a syllable made up of a short vowel and an obstructed consonant (the first of any group of consonants except a mute and a liquid) is long.*

The general results reached in this paper may, for pedagogical purposes, be represented to the eye in a brief table, in which the elements that count appreciably to the ear are marked, the others being left unmarked. To the latter class belong single consonants standing between vowels, mutes followed by liquids, and initial consonants following obstructed consonants; for, in the passage from one vowel-position to another, the consonantal contact and withdrawal, or approach and withdrawal, as the case may be, occupies so small an interval as to seem to add nothing to the length of the syllable to which it belongs. (The words in brackets, being inserted only to give a context to the final syllable, are left unmarked.)

The unit is the length of a short vowel, or its approximate equal, the length of an obstructed consonant.

ă-nŭs [ista],

ăñ-nŭs [iste],

ăă-nŭ-lŭs [iste], = ā-nŭ-lŭs [iste],

ăš-pěr [odor],

¹ For the present, I leave without discussion the question of the place of the second consonant in groups like *nct* and *mpt*.

ăp-tă [dies],
ă-pră [saeva] (in daily speech),
ăp-ră [saeva] (at will, in classical poetry).

The case of obstruction of a consonant at the end of a word may be represented thus :

ăñ-nüş [totus].